VIA HAND DELIVERY
Date of Deposit: April 14, 2003

Attorney Docket No.: 22650-001 CIP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	Dapprich *et al.*		
SERIAL NUMBER:	09/735,099	EXAMINER:	Not Yet Assigned
FILING DATE:	December 11, 2000	ART UNIT:	1632
FOR:	METHOD FOR SELECTIVELY ISOLATING A NUCLEIC ACID		

Commissioner for Patents
Washington, D.C. 20231
BOX AF

TRANSMITTAL LETTER

Enclosed for filing for the above-referenced patent application are the following:

1. Supplemental Response to December 12, 2002 Office Action (5 pgs);
2. Notice of Appeal (1 pg);
3. Petition for Extension of Time (in duplicate) (1 pg);
4. Check No. 16031 in the amount of $55.00 for extension fee;
5. Check No. 16032 in the amount of $160.00 for Notice of Appeal; and,
6. Return postcard.

The Commissioner is authorized to charge any additional fees that may be due, or to credit any overpayment, to the undersigned's account, Deposit Account No. 50-0311, Ref. No. 22650-001CIP.

If the enclosed papers are considered incomplete, the Mail Room is respectfully requested to contact the undersigned collect at (617) 542-6000, Boston, Massachusetts.

Respectfully submitted,

Ivor R. Elrifi, Reg. No. 39,529
David E. Johnson, No. 41,874
Attorneys for Applicants
MINTZ, LEVIN, COHN, FERRIS,
GLOVSKY and POPEO, P.C.
One Financial Center
Boston, Massachusetts 02111
Tel: (617) 542-6000
Fax: (617) 542-22410

Dated: April 11, 2003

VIA HAND DELIVERY
Date of Deposit: April 14, 2003

Attorney Docket No.: 22650-001 CIP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	Dapprich et al.		
SERIAL NUMBER:	09/735,099	EXAMINER:	Betty J. Forman
FILING DATE:	December 11, 2000	ART UNIT:	1634
FOR:	METHOD FOR SELECTIVELY ISOLATING A NUCLEIC ACID		

Assistant Commissioner for Patents
Washington, D.C. 20231
Box AF

Supplemental Response to December 12, 2002 Office Action

Further to the Advisory Action mailed March 27, 2003 and the Amendment submitted March 12, 2003, please consider the following remarks.

Applicants note that the Examiner has entered Applicants' Amendment after Final and withdrawn the rejections under 35 USC 112, first and second paragraphs. The Examiner maintains the rejections over Whitcombe et al., WO97/42345 ("Whitcombe") and Lundeberg et al., US Patent No. 6, 482,592 ("Lundeberg").1 Below Applicants address the reasons given by the Examiner in the Advisory Action for maintaining the rejections.

With respect to Whitcombe the Examiner states:

1 Claims 1,3-6, 10, 13-16, 18, and 21 are rejected as anticipated under 35 USC § 102(b) by Whitcombe. Claims 1, 3-15, 17, 18, and 21 are rejected as anticipated under 35 USC § 102 (e). Claim 16 is rejected under 35 USC § 103(a) as unpatentable over Lundeberg in view of Whitcombe, and claim 19 is rejected under 35 USC § 103(a) as unpatentable over Lundeberg.

> [T]he open claim language "comprising" encompasses any amplification step of Whitcombe. Additionally, the argument is not found persuasive because the instant claims are not limited to detection of the "starting nucleic acid sequence" as argued. In contrast, the claims are drawn to a method for separating a nucleic acid sequence of interest. The claims are not limited to separation of the starting nucleic acid and the claims do not recite method steps for isolation and detection of the starting nucleic acid. Therefore, the argument is not relevant to the instant claims.

Applicants respectfully disagree and point out that the claims are drawn to a method that requires isolating and detecting a starting nucleic acid sequence of interest. The claim does not encompass a method in which the starting nucleic acid sequence of interest is amplified prior to being isolated.

This can be seen by comparing the first recited method step with the last two recited method steps in claim 1. The claim specifies providing a population of nucleic acid molecules that includes (emphasis added throughout) at least one nucleic acid sequence of interest, and which includes a target nucleic acid sequence in the vicinity of a distinguishing element. The final two steps of the method claim require immobilizing a bound targeting element to form an immobilized targeting element-separation group complex that includes the at least one nucleic acid sequence of interest, i.e., the sequence that is provided in the first recited step. In the final step the claim requires removing the immobilized targeting element-separation group complex that includes the at least one nucleic acid sequence of interest from the population of nucleic acid molecules, to thereby separate the nucleic acid sequence of interest from the population of nucleic acid molecules. Thus, the claim clearly requires that it is the same nucleic acid sequence that is initially provided and ultimately removed and separated from a starting population of nucleic acid sequence.

The presence of the transitional term "comprising" in the claim does not alter this conclusion. For a process to be encompassed by the claim, it must end with immobilizing and separating a starting nucleic acid (or acids) of interest that is present in the provided population of nucleic acid molecules. Thus, detection and isolation of a nucleic acid molecule that is amplified from a nucleic acid sequence in the starting population of nucleic acid molecules does not fall within the claimed invention because it is not the starting nucleic acid molecule that is detected.

As described in Applicants' previous response, Whitcombe does not describe a method in which the initial nucleic acid sequence of interest is isolated. Instead, it describes a method in which copies generated through polymerase chain reaction events (PCR) of a starting nucleic acid sequence of interest are isolated. In contrast, Applicants' method, because it does not include amplification steps, allows for separating and isolating the actual sequence present in a population of nucleic acid sequences. Thus, when the starting population includes a large sequence of interest, the large sequence itself can be recovered. The isolation of nucleic acid sequences of interest on the order of 50,000 to 100,000 base pairs in size according to the claimed method is discussed in the specification at page 10, lines 17-30 and in FIGS. 7 and 8 of Applicant's specification. The PCR-based method described in Whitcombe, in contrast, does not allow for isolation of the actual molecule that is present in a starting population of nucleic acid sequences.

With respect to Lundeberg, the Examiner states:

> Lundeberg teaches the method wherein separation group attachment is improved/enhanced in the presence of the distinguishing element. As such , the attachment is conditional i.e. improved/enhance in the presence of the distinguishing element. The claims are given the broadest reasonable interpretation consistent with the claim language whereby "conditional" is encompassed by the improved/enhanced attachment conditions of Lundeberg.

Applicants respectfully disagree. The Examiner is using the term "conditional" in a way that is contrary to its understood meaning. The term "conditional" does not encompass a situation in which the occurrence of one event is improved or enhanced by occurrence of a second event. Rather, the word "condition" in the context it is used in Applicants' claimed invention, is understood to mean "Something indispensable to the appearance or occurrence of something else" (The American Heritage Dictionary of the English Language, 1978, Houghton Mifflin Co., Boston). This definition excludes a situation in which the occurrence of a second event is merely improved or enhanced by the occurrence of a first event.

When the term "conditional" is used with its recognized meaning, the claimed invention is clearly novel and non-obvious over Lundeberg. As Applicants described in their previous response, this reference does not describe a method in which attachment of the separation group is conditional on, i.e., indispensable to, the presence of the bound targeting element and a distinguishing element in the vicinity of the bound targeting element. Rather, the capture probe of Lundeberg will bind and capture a nucleic acid even in the absence of a bound targeting element (or modular probe, according to Lundeberg's terminology).

In view of the foregoing comments, reconsideration and withdrawal of the remaining rejections for anticipation and obviousness is requested.

A petition for a one month extension of time and a Notice of Appeal are submitted along with this response. Please charge any additional fees required in connection with the papers

transmitted herewith, or credit any overpayment of same, to Deposit Account No. 50-0311 (Reference No. 22650-001CIP).

Respectfully submitted,

David E. Johnson No. 41,874
Attorney for Applicants
c/o MINTZ, LEVIN
One Financial Center
Boston, Massachusetts 02111
Tel: (617) 542-6000
Fax: (617) 542-2241

Dated: April 11, 2003

TRA 1781722v2